

REMARKS

Claims remaining in the present application are Claims 1-27.

CLAIM REJECTIONS

35 U.S.C. 102(e)

Claims 1, 3-9, 17, and 19-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Zizzo (Pub. No. U.S. 2002/0188910 A1) (hereinafter, Zizzo). The rejection is respectfully traversed. It is respectfully submitted that Claims 1, 3-9, 17, and 19-27 are not anticipated by Zizzo.

Independent Claim 1 recites:

A method of facilitating circuit design, said method comprising:

a) causing to be displayed information related to a module of a plurality of available modules, said module representing a function implementable in resources available to implement a circuit, said display performed in response to said module being selected; and

b) determining a valid position for said module in a graphical user interface, said graphical user interface having a plurality of resource icons representing said resources, said valid position based on characteristics of said module and characteristics of said resources, said determination made in response to a request for said valid position for said module in said graphical user interface.

Claim 1 recites "determining a valid position for said module in a graphical user interface, said graphical user interface having a plurality of resource icons representing said resources." Claim 1 further recites that "a module represents a function implementable in resources available to implement a circuit." Thus, Claim 1 recites that the GUI has resources icons that represent resources and that a valid position is determined for the selected module in the GUI having the resource icons. Applicants note that it is the module that is claimed as selected and that the resources are able to implement

functions represented by the (selected) module. Zizzo does not teach or suggest “determining a valid position for said module in a graphical user interface, said graphical user interface having a plurality of resource icons representing said resources,” as claimed.

Zizzo discloses a system that allows a user to search and use previously designed IP blocks to facilitate designing a new SoC design (Abstract). Zizzo discloses that the user may select a type of electronic component (e.g., IP core) and place the IP core in a design (Fig. 3). However, Zizzo fails to teach or suggest “a graphical user interface having a plurality of resource icons representing said resources,” as claimed. Note that Applicants have claimed that the module represents a function implementable in the resources and that the GUI comprises resource icons. Zizzo discloses that a user may place and move a selected IP core in the overall SoC design (paragraph [0054]). Zizzo may allow for a graphical representation of the selected IP core in the SoC design. For example, paragraph [0054] discloses that the original creator of the IP core must create the symbol for the IP core and the graphical representation support file. However, the IP core is what is selected and placed into the design, as opposed to the resources for implementing the IP core or its functions. Applicants do not understand the overall SoC design of Zizzo to contain resource icons representing resources that may implement the functions, as claimed. Thus, while Zizzo may teach using graphical icons for the IP cores, Zizzo fails to teach graphical icons for resource icons for implementing the IP cores or their functions.

Moreover, Zizzo fails to teach or suggest “determining a valid position for said module in a graphical user interface,” as claimed. The Office Action asserts that this feature is a characteristic of a GUI (pp. 5-6). Applicants respectfully assert that the claimed limitation, “determining a valid position for said module in a graphical user interface,” is not a characteristic of a GUI. Further, Applicants respectfully assert that this claimed limitation is neither taught nor suggested by Zizzo. In fact, Zizzo clearly teaches away from this claimed limitation. Paragraph [0052] discloses that footprint configurations of the selected part are presented to allow the user to make more informed decisions about placement in the overall design. Thus, the user must determine where to place the IP core in the overall design. In contrast, the claimed limitation determines a valid position for the (selected) module in the GUI. Thus, the designer is relieved of having to examine the footprint of the selected module to determine where to place the selected module.

For the foregoing rationale, it is respectfully submitted that Claim 1 is not anticipated by Zizzo. As such, allowance of Claim 1 is earnestly solicited.

Claims 3-9 depend from Claim 1, which is believed to be allowable for the foregoing reasons. As such, it is respectfully submitted that Claims 3-9 are not anticipated by Zizzo. Allowance of Claims 3-9 is earnestly solicited.

Claim 17 recites similar limitations as Claim 1. For the reasons discussed in the response to Claim 1, it is respectfully submitted that Claim 17 is not anticipated by Zizzo. As such, allowance of Claim 17 is earnestly solicited.

Claims 19-27 depend from Claim 17, which is believed to be allowable for the foregoing reasons. As such, it is respectfully submitted that Claims 19-27 are not anticipated by Zizzo. Allowance of Claims 19-27 is earnestly solicited.

35 U.S.C. 103(a)

Claims 2, 10-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zizzo in view of Comeau et al. (Pub. No. U.S. 2002/0099863) (hereinafter, Comeau). The rejection is respectfully traversed. It is respectfully submitted that Claims 2, 10-16, and 18 are not rendered obvious by Zizzo in view of Comeau.

Independent Claim 10 recites, in part:

- a) determining valid positions in a graphical user interface for selected modules to be placed in said graphical user interface, said graphical user interface describing resources operable to implement said selected modules, said valid positions based on characteristics of said selected modules and characteristics of said resources; and
- b) generating at least two elements selected from the group consisting of: an application programming interface (API) for programming an operation of a first of said selected modules, source code for realizing said selected modules in said resources, an interrupt vector table having a call to an interrupt service routine for a first of said selected modules, and a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface.

Claim 10 recites, "determining valid positions in a graphical user interface for selected modules to be placed in said graphical user interface". For reasons discussed in the response to Claim 1, Zizzo fails to teach or suggest this claimed limitation. Comeau fails to remedy this deficiency. Therefore, neither Zizzo nor

Comeau, alone or in combination, teach or suggest this claimed limitation. As such, Claim 10 is not rendered obvious over the cited combination.

Claim 10 further recites that at least two of the following elements are generated: 1) an application programming interface (API) for programming an operation of a first of said selected modules; 2) source code for realizing said selected modules in said resources; 3) an interrupt vector table having a call to an interrupt service routine for a first of said selected modules; and 4) a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface. Neither Zizzo nor Comeau teach or suggest, alone or in combination, an API application programming interface (API) for programming an operation of a first of said selected modules, an interrupt vector table having a call to an interrupt service routine for a first of said selected modules, or a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface. Therefore, Claim 10 is not rendered obvious by Zizzo in view of Comeau.

Regarding the limitation of “generating an application programming interface (API) for programming an operation of a first of said selected modules,” the rejection concedes that Zizzo fails to disclose this limitation. Moreover, Applicants respectfully submit that Zizzo fails to teach or suggest this limitation. Comeau also fails to disclose or suggest this limitation.

In support of the rejection, the Office Action cites Comeau at paragraph [0043]. The Office Action asserts on page 4 that Comeau recites an apparatus that supports processors executing interpreted language applications that make use of

an API, an interrupt vector table, and an interrupt service routine. While Comeau may disclose the use of an API, Comeau does not teach or suggest the generation of APIs, as claimed. Thus, Applicants respectfully submit that the combination of Comeau with Zizzo fails to teach or suggest “generating an application programming interface (API) for programming an operation of a first of said selected modules,” as claimed.

Regarding the limitation of “generating an interrupt vector table having a call to an interrupt service routine for a first of said selected modules,” Zizzo fails to teach or suggest this limitation. Comeau also fails to teach or suggest this limitation. In support of the rejection, the Office Action asserts that Comeau makes use of interrupt vector tables and routines. However, the Office Action fails to assert that Comeau generates such items. Applicants note that Comeau discloses an interrupt vector table. However, Comeau fails to teach or suggest “generating an interrupt vector table having a call to an interrupt service routine for a first of said selected modules,” as claimed. Thus, the combination of Comeau and Zizzo fails to teach or suggest, “generating an interrupt vector table having a call to an interrupt service routine for a first of said selected modules,” as claimed.

Regarding the limitation of “generating a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface,” the rejection cites Paragraph [0031] of Zizzo, which discloses that data sheets may be available for the electronic components. The electrical components are described as dynamic parts. However, Zizzo fails to teach or suggest the generation of a data sheet for the circuit that the user constructs. For example, Zizzo fails to teach or

suggest the generation of a data sheet for a circuit constructed with the electronic components. Thus, Zizzo fails to teach or suggest generation of a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface, as claimed. Comeau fails to remedy this deficiency in Zizzo, in that Comeau fails to teach or suggest, “generation of a data sheet for a circuit comprising said selected modules as positioned in said graphical user interface,” as claimed.

Because neither Zizzo nor Comeau, alone or in combination, teach or suggest any of the three discussed limitations, generating at least two elements selected from the group is not rendered obvious by Zizzo in view of Comeau.

For the foregoing rationale, allowance of Claim 10 is respectfully solicited.

Claims 11-16 depend from Claim 10, which is believed to be allowable for the foregoing reasons. As such, it is respectfully submitted that Claims 11-16 are not rendered obvious by Zizzo in view of Comeau. As such, allowance of Claims 11-16 is respectfully solicited.

Claims 2 and 18

For the reasons discussed in the response to Claim 1, Claim 1 is not taught or suggested by Zizzo. Comeau fails to remedy this deficiency in Zizzo. Therefore, neither Zizzo nor Comeau, alone or in combination, teach or suggest the claimed limitation of Claim 1. As Claim 2 depends from Claim 1, it is respectfully submitted

that Claim 2 is neither taught nor suggested by Zizzo nor Comeau, alone or in combination. Therefore, allowance of Claim 2 is earnestly solicited.


Claim 18, which depends from Claim 17, recites similar limitations as Claim 2. Claim 17 recites similar limitations as Claim 1. For the reasons discussed with respect to Claim 2, it is respectfully submitted that Claim 18 is neither taught nor suggested by Zizzo nor Comeau, alone or in combination. Therefore, allowance of Claim 18 is earnestly solicited.

CONCLUSION

Should the Examiner have a question regarding the instant response, the Applicants invite the Examiner to contact the Applicants' undersigned representative at the below listed telephone number.

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Respectfully submitted,
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